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The West (Alaska, California, Hawaii, and Nevada)

In the United States, the opioid crisis is becoming more and more prevalent. Even with regulation, the illegal use and abuse of opioids is rampant and spreading throughout communities. Abuse of opioids is not only with illegal drugs but also prescription drugs. Drug deaths have been climbing steadily every year since the late 1990s. Each state has its own regulations to try and combat this crisis.

In the western United States, namely Alaska, California, Hawaii, and Nevada, heroin and prescription opioids including hydrocodone and oxycodone, are ubiquitous (Narconon International, n.d.). Codeine, an opiate, is also abused (Opioid State Targeted Response to the Opioid Crisis Grant Program, 2018). Heroin is an illegal Schedule I drug (U.S. Department of Justice Drug Enforcement Administration, n.d.) whereas the other opioids are Schedule II drugs that can be obtained legally with a prescription (U.S. Department of Justice Drug Enforcement Administration, n.d.).

Each drug has multiple names. Heroin is also called Big H, Black Tar, Chiva, Hell Dust, Horse, Negra, Smack, and Thunder (United States Drug Enforcement Administration, 2017). Hydrocodone (generic) is sold under the brand names Vicodin, Lortab, Norco, Zohydro (Delphi Behavioral Health Group, 2018), Anexsia, Dicodid, Hycodan, Hycomine, Lorcet, and Tussionex (Foundation for a Drug-Free World, n.d.). Its street names include Vike, and Watson-387 (National Institutes of Health, 2017). Oxycodone's brand names include Oxycontin (Narconon International, n.d.), Percodan, Endodan, Roxiprin, Percocet, Endocet, and Roxicet. On the street, it goes by O.C., Oxycet, Oxycotton, Oxy, Hillbilly Heroin, and Percs (National Institutes of

Health, 2017). Codeine's street names are Captain Cody, Cody, Lean, Schoolboy, Sizzurp, and Purple Drank (National Institutes of Health, 2017). When codeine is combined with glutethimide, it is called Doors & Fours, Loads, and Pancakes and Syrup (National Institutes of Health, 2017).

There are many ways to obtain opioids. In Alaska, criminal drug organizations are providing the supply of drugs to the drug abusers. Alaska's location, which is both remote and vast, is an ideal place for drug traffickers to distribute drugs (Alaska State Troopers Annual Drug Report, 2016). California has many global shipping ports, which makes it easy for criminals to smuggle drugs into the country and distribute them (Drug and Alcohol Addiction for California, 2018). There are "doctor shoppers, employees who steal from the drug inventory, prescription fraud, including forgeries and other types of prescription falsification, and physicians who indiscriminately prescribe and write prescriptions for reasons other than legitimate medical purposes." (Narconon International, n.d.) In Nevada, medications are purchased illegally through internet pharmacies (Narconon International, n.d.).

Opioid abuse is found across all socioeconomic backgrounds and in all age groups. Children as young as 12 use prescription opioids for recreational reasons (Opioid State Targeted Response to the Opioid Crisis Grant Program, 2018). At the same time, in Nevada, the 18-25 year old age group is the group with the highest use of heroin and pain relievers (NIDA, n.d.).

How does the West compare to the rest of the United States in terms of opioid abuse? Nevada has more opioid prescriptions than the other states in this region, and in 2015, was above the national average with 83 opioid prescriptions per 100 persons, while the average U.S. rate was 70 prescriptions (National Institute on Drug Abuse, 2018). In 2016, this rate dropped slightly, but Nevada was still 13th in prescribing rates (Opioid State Targeted Response to the

Opioid Crisis Grant Program, 2018). In 2017, California, Alaska, and Hawaii had prescription writing rates below the national average (Centers for Disease Control and Prevention, 2017).

In general, rates of opioid abuse and deaths from overdose have been steadily increasing over the last 30 years (National Safety Council, 2018). In terms of severity, the prescription opioid pain reliever overdose death rate was more than double the rate in the United States in 2012. Heroin associated deaths more than quadrupled from 2009 – 2015 (Alaska State Troopers Annual Drug Report, 2016).

All states have policies in place that oversee opioid prescription writing. As a result of the opioid epidemic, the governor of Alaska declared a State of Emergency in 2017 to try and reduce access to controlled substances, investigate and prosecute drug organizations, and make distribution of large quantities of a drug a felony offense punishable by up to 20 years in prison (Walker, 2017). In Nevada, the Controlled Substance Abuse Act of 2017 requires that a risk assessment for patients be completed before a physician prescribes an opioid (Gray, 2017). Providers must "obtain a patient utilization report every 90 days (Opioid State Targeted Response to the Opioid Crisis Grant Program, 2018). Overdoses are reported and prescribers must register with the state (Gray, 2017). Training requirements are in place for prescribers (Opioid State Targeted Response to the Opioid Crisis Grant Program, 2018). Additionally, retailers may not sell over-the-counter Ephedrine and Pseudoephedrine to a person under the age of 16. To regulate theft/loss of controlled substance, pharmacies, hospitals, and nursing homes are required to complete the DEA Form 106, "Report of Theft or Loss of Controlled Substances" if such situation arises (Alaska State Troopers Annual Drug Report, 2016).

Opioids activate receptors in the brain. Heroin and codeine activate mu, kappa, and delta receptors (Huecker & Marraffa, 2018), whereas hydrocodone and oxycodone activate mu

receptors (National Center for Biotechnology Information, n.d.). Due to their euphoria and analgesia-inducing properties, the possibility of addiction is high (Huecker & Marraffa, 2018). Some adverse effects of opioids are respiratory depression, constipation, miosis, and severe, life-threatening pulmonary edema (Huecker & Marraffa, 2018). Other adverse effects include "gastrointestinal distress, nausea, vomiting, constipation; dizziness; palpitations; drowsiness; pruritis; restlessness, excitement; vertigo; Larger doses result in muscle weakness; tremors; delirium; coma; and convulsions. Body temperature and blood pressure may fall (Peechakara & Gupta, 2018)." Oxycodone may cause liver problems as well (National Center for Biotechnology Information, n.d.).

To combat the opioid crisis, the medical community, government, and media have taken action. The medical community performs frequent community outreach (Association of American Medical Colleges, 2017). In medical schools, practitioners work to come up with other ways to fight pain besides medication (Association of American Medical Colleges, 2017). At the same time, laws like the Good Samaritan Drug Overdose Act, allow opioid antagonist drugs (naloxone) to be more available (Drug Policy Alliance, 2015). Numerous drug rehabilitation programs and drug treatment facilities exist, and many have programs dedicated to opioid addiction. Medication assistance therapy programs do exist as well, but need to be expanded (Gray, 2017). Finally, the media has been integral in spreading awareness of the opioid epidemic. Often, the media is able to put a personal spin on an otherwise anonymous affliction by featuring personal stories of drug users (Dunne, 2017).

One such story is Mitchell's article, "Dr. Drew: 'Star Treatment' May Have Killed Tom Petty, Michael Jackson, and Prince" (2018). This article can be found at https://amp.clarionledger.com/amp/1066653001. Mitchell (2018) discusses the deaths of these

music superstars and describes the multiple drugs they were taking. Doctors prescribed the intense drug regimens that included strong opioids and benzodiazepines. The ultimate message of the article is that famous people often get special treatment, that doctors do not necessarily understand addiction, and that tragically, Michael Jackson, Prince, and Tom Petty paid the ultimate price.

When the news of Michael Jackson's, Prince's, and Tom Petty's deaths were announced, the world was devastated. These men were highly respected and beloved musicians. Sadly, this type of story is not rare for California. Increasingly, we are hearing about drug overdoses in celebrities. In Mitchell's (2018) article, I was stunned by the sheer number of drugs that these musicians were taking. We have learned that one opioid can have adverse effects, but mixing can be deadly. Why were these drug regimens allowed? At the same time, these men were very wealthy and had access to the best doctors, but somehow they did not receive the best treatment.

Regional factors did come in to play. Jackson, Petty, and Prince were superstars who could do no wrong, and the article made it seem like they did not necessarily have to follow the rules of conventional medicine. Petty was a recovering heroin addict and was then given multiple extremely strong opioids by a physician! He was even given a fentanyl mixture that is not readily available in the United States. That is unthinkable!

Practicing dental hygiene in a region where drug abuse is prevalent is challenging. To begin with, when taking a medical history, a patient may not be forthcoming regarding recreational drug use. It is crucial to build a trusting relationship with the patient so he/she will feel comfortable enough to disclose this information. Patient communication is one way to foster this relationship. Asking open-ended questions and not being afraid to ask them is important. Verbal and nonverbal communication should be non-judgmental.

When it comes to treatment planning and direct patient care, consideration should be given to known/unknown drug status. Treatment may not be advisable if the patient is currently using drugs. Furthermore, if a patient abuses opioids, or has abused opioids, these types of medications should be avoided. At the same time, direct care might be altered because of adverse effects of drug use. Certain body movements, anxiety, and restlessness are adverse effects of drugs, which may manifest during care. The clinician must be prepared to handle this situation.

The dental hygienist has many roles. Education is a primary role, so it is necessary to self-educate regarding regional drugs. With this information I will be better equipped to treat patients, answer their questions, and react in emergency situations. It also comes back to medical history and knowing what questions to ask. At the same time, because hygienists are educators, it stands to reason that we would educate patients about drug abuse. We already advise patients about tobacco, so other drugs should be included. Ultimately, it is in the best interest in the patient to give him/her as much information as possible. Also, the information given may not be for that patient but for a friend or family member.

It is important to remain current on abuse trends. The more information we have, the better prepared we will be to handle different situations that might arise in the clinic. Finally, it is important to be able to identify intraoral markers of drug use. They may be the first and only signs that someone may be abusing drugs. The more knowledgeable someone is when dealing with a patient's health, the better prepared one will be. This will enable the clinician to be proactive rather than reactive when a problem arises.

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